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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,124	08/18/2006	Isao Sakamoto	P30245	1323
7055 7590 01/12/2009 GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191				
EXAMINER TAKEUCHI, YOSHITOSHI				
ART UNIT 1793		PAPER NUMBER		
NOTIFICATION DATE 01/12/2009		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com  
pto@gbpatent.com

### Office Action Summary

**Application No.**

10/598,124

**Applicant(s)**

SAKAMOTO ET AL.

**Examiner**

YOSHITOSHI TAKEUCHI

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

**DETAILED ACTION**

1. Claims 1-16 are presented for examination, wherein claim 1 is amended.
2. The 35 U.S.C. § 112 rejection of claim 1 is withdrawn as a result of the applicant's amendment to the claim.

***Claim Rejections - 35 USC § 102***

3. The text of those sections of the Title 35 U.S. Code not included in this section can be found in a prior Office action.
4. Claims 1 and 3-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Saito et al (PCT/JP02/09946, with specific references made through the national stage publication of US 2004/02509129).
  - a. Saito is applied to the claims for the same reasons stated in the previous Office action, with the following modifications in response to the applicant's amendments:
  - b. Regarding the amended limitations of claim 1, Saito teaches the flux component reacts at a melting point of the solder particles (Table 1, where the flux reaction temperatures is 100° C to 120° C. The soldering temperature of some SnIn<sub>52</sub> soldering alloys is known to be 118° C); the mixture of the liquid substance and solder particles has a viscosity that flows at room temperature (Paragraph 0117, where Saito teaches a solder paste which can be applied by "flowing or dipping," paragraph 0118, where the method of soldering may be "performed by an ordinary method under ordinary conditions, and Table 1, synthesis example 3 and paragraph 0122, where one embodiment expressly taught has a viscosity of 0.1 poise at 25°C); and the solder particles are mixed in the

liquid substance at room temperature (paragraph 0113, where mixing may be performed at any temperature, but preferably at 5 to 25°C).

***Claim Rejections - 35 USC § 103***

5. The text of those sections of the Title 35 U.S. Code not included in this section can be found in a prior Office action.
6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al (PCT/JP02/09946, with specific references made through the national stage publication of US 2004/02509129) in view of Ono et al (US 2003/0047034).

Ono is further applied to the claim for the same reasons stated in the previous Office action.

***Response to Arguments***

7. Applicant's arguments filed November 14, 2008 have been fully considered but they are not persuasive.
8. Regarding the response to the 35 U.S.C § 102(b) rejection, the applicant argues that “Saito requires the use of a solder paste which is applied ‘by printing the solder paste through a metal mask using a solder printer with an ordinary method.’” (Response to Office action, page 6, emphasis in the original, citation to Saito omitted), whereas the presently claimed invention is fundamentally different because it claims “a mixture of a liquid substance and solder particles that flows at room temperature.” (*Id.*, emphasis in the original.).

In response, Saito teaches a solder paste which can be applied by “flowing or dipping” (paragraph 0117, emphasis added), where the method of soldering may be “performed by an ordinary method under ordinary conditions” (paragraph 0118). Furthermore, one embodiment

expressly taught has a viscosity of 0.1 poise at 25°C. (Table 1, synthesis example 3 and paragraph 0122). As a result, the solder composition taught by Saito may flow at room temperature, and reads on claim 1 of the instant invention.

9. Regarding the response to the 35 U.S.C § 102(b) rejection, the applicant argues that "the obviousness rejection to claim 2 is based on the assumption that claim 1 is anticipated by SAITO" and that "ONO does not cure or supply the deficiency of SAITO by merely teaching an additional aspect of claim 1." (Emphasis in the Response to Office action, page 7).

In response, the examiner respectfully refers the applicant to the response to applicant's argument for claim 1, *supra*, and there is no need for Ono to cure any additional deficiency than provided in the prior Office action.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOSHITOSHI TAKEUCHI whose telephone number is (571) 270-5828. The examiner can normally be reached on Monday-Thursday 9:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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1793

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